

E. Campbell

'MIX AND MATCH' -  
THE SELECTION OF READING MATERIAL FOR  
MIXED ABILITY CLASSES

'Of all the needs a book has the  
chief need is that it is readable.'

Anthony Trollip (1803 - 1882)

It is ironical that whilst many teachers will go to great lengths to ensure that a child is given a basic reader which is compatible with his level of reading development, much of the reading material the child is expected to use in the other subject areas is not graded or differentiated. Teachers tend to select textbooks on the basis of presentation and content and fail to give sufficient attention to whether or not the readability levels of the books are suitable for every child in the class. Because of this many children are either bored or frustrated by the material they are required to read in different subjects. The mismatch that frequently occurs between the reading material and the learner is one of the prime reasons why many children fail to cope with school. The importance of assessing difficulty levels of books in all areas of the curriculum was stressed in the Bullock Report (HMSO, 1975) by the comment:

The effect of modern approaches in many subjects is to put a higher premium than ever on the ability to read. There is increasing use of

assignment cards and worksheets. All too often these and the tasks they prescribe make no allowance for individual differences in reading ability, and the advice given to subject departments should include a concern for readability levels in materials being used. (para. 15.8)

Implied in this comment is the notion that as reading is an important tool for learning, every subject department must shoulder the responsibility for the development of children's reading. Furthermore, if children are to profit from the material they are expected to read, subject departments and class teachers must cater for individual differences in reading ability when selecting reading material for the children to use.

But what is meant by readability? Harrison (1980, p 14) refers to readability as '...the constellation of text factors which together determine whether a reader is likely to find the book attractive, interesting and comprehensible'. Primarily it is concerned with the problem of matching. On the one hand there are books and other reading material which differ in style, content and complexity. On the other there are individuals with given interests and reading skills. The extent to which the individual can benefit from the books he reads will be determined largely by the way the two sides are matched.



Three variables, presentation, interest and comprehensibility are the main determinants of the readability level of a text. Factors which contribute towards these are:

1. factors in the reader - age, sex, motivation, reading skills and previous experiences;
2. factors in the presentation - type size, spacing, format of print, colour, use of pictures and illustrations;
3. factors of content - fact, fiction, concepts;
4. factors of language - vocabulary, style, grammar.

The above factors interact with each other to influence the extent to which a text is readable for individual children. A child might have the skills to decode a text but experience difficulty with the vocabulary and concepts in it. For instance a child might be able to read ( decode ) the following statement taken from a Standard Two mathematics textbook 'Find the difference between 807 and 648. Check your answers by means of inverse operation.' Difficulty in understanding the term 'inverse operation', a problem of comprehension, could prevent him from completing the exercise. This could be interpreted mistakenly as a weakness in mathematics when in fact it is a language, or more specifically, a reading problem.

How can the readability level of a text be assessed? There is no doubt that there are some teachers who are reasonably proficient at judging subjectively the reading levels of books. To do so they consider the factors



outlined above, but to do it effectively and get the right degree of match they have to know their pupils and reading material very well indeed. However there are objective ways of determining the readability levels of texts, two of which will be discussed in this paper.

A number of formulae have been constructed which can be used to determine the readability of texts. In the main the more commonly used formulae rely on two variables, length of words and length of sentences as the determinants of the difficulty of a text.

The problem of using formulae is that they are time consuming and sometimes difficult to employ, however one which is relatively easy to use is the Fry Graph (Fry 1977). It has been used effectively at every level from the Junior Primary stage to the top end of high school. Furthermore the correlation between the Fry Graph and other readability formulae is as high as between each of the other formulae.

There are five steps in applying the Fry Formula:

1. Randomly select three 100-word passages from the text, starting at the beginning of a sentence.
2. Count the number of syllables in each of the 100-word passages. (When counting numbers and abbreviations count one syllable for each symbol.)

3. Count the number of sentences in each of the 100-word passages. If all of the last sentence is not included in the passage, estimate the length of the sentence to the nearest one-tenth of the whole sentence.

4. Plot the average number of sentences and syllables on the Fry Graph. (See fig.i) The point of intersection will give you the approximate grade level for which the text is suitable.

5. To find an approximate reading age equivalent, add five.

Readability formulae are useful for predicting the general readability levels of texts. But if a teacher wishes to determine whether a particular book or reading material will benefit a particular group of students he can make use of cloze procedure.

Cloze procedure is essentially a test of comprehension. However although it does not measure the 'interest' factor in readability it does require the reader to draw on his previous experience in order to complete the cloze procedure exercise. Because of this, cloze procedure might be a more valid test of the readability of text for individuals or particular groups of pupils than are the readability formulae.

Cloze procedure involves the reader in filling in missing words in a passage and it is as follows:



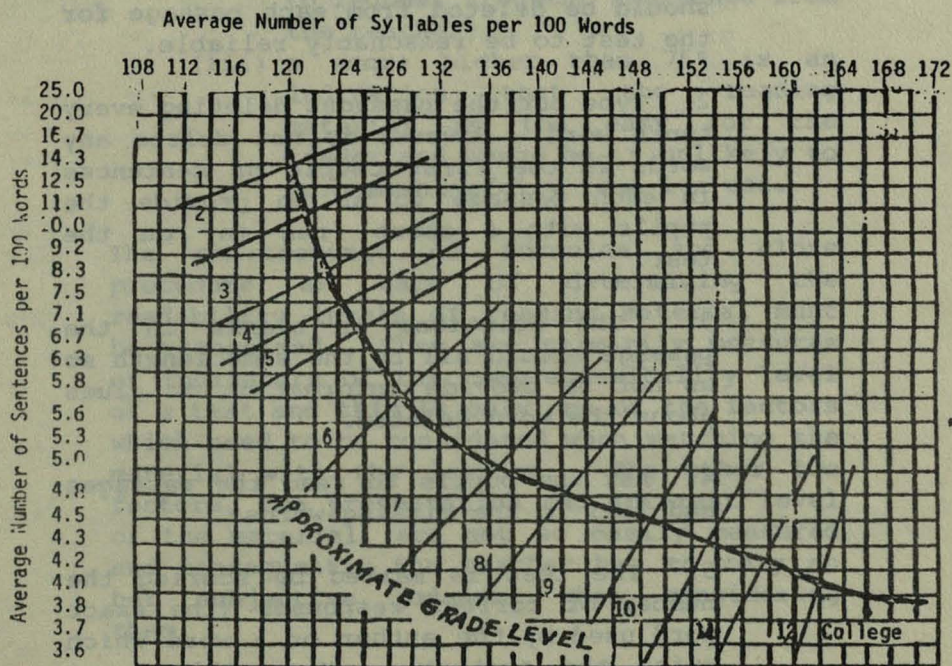


Figure 1 Fry's extended readability graph

1. Randomly select three passages from a book or reading material which the pupils have not read or studied. the length of the passages varies according to the number of words to be left out. Harrison suggests that thirty five words should be deleted from each passage for the test to be reasonably reliable.

2. Type out the passages deleting every tenth word. However do not delete any words in the first couple of sentences in each passage so as to provide the pupils with a short 'run in' on the test.

3. The deletions or blanks in the passage should all be the same length so as not to provide information or clues about the word deleted.

4. Ask the pupils to read the passages and fill in the missing words.

5. The test is marked by scoring the number of correct responses (the exact word used by the author or a word which suits the context). Misspellings are scored as correct. The scores are changed to a percentage.

6. Research (Cohen 1975, Bormuth 1968) indicates that the scores should be interpreted as follows:

- (i) a score of less than 45% means that the book or material is too difficult for the pupil to use



without making excessive demands on the teacher;

(ii) a score between 45% and 75% suggests that the reading material is suitable for the pupil to profit from its use without having to request frequent assistance from the teacher;

(iii) a score higher than 75% is an indication that the reading material is too easy for the reader and hence he is unlikely to gain meaningfully from its use.

The shortcomings of formulae and cloze procedure as ways of determining the readability levels of reading material must be recognised. They are primarily measures or indicators of the comprehensibility level of a text and this is only one of the factors which need to be considered when matching the material with the learner. The other two factors, the presentation and interest level of the material, are not so easily measured and consequently the teacher has to rely on her subjective judgment when considering them.

Textbooks and other informational reading material can cause learning problems for many children. Teachers must ensure that the material which the children are expected to read in all areas of the curriculum is appropriate for their stage of reading development and that children have the reading strategies, vocabulary and concepts required for them to profit from the material.



## REFERENCES

- BORMUTH, J. 1968. 'Cloze test readability: criterion reference scores.' Journal of educational measurement, vol. 5, pp 189-196.
- COHEN, J.H. 1975. 'The effect of content material on cloze test performance.' Journal of reading, December 1975, vol. 19, no. 3, pp 247-250.
- FRY, E. 1977. 'Fry's readability graph: clarification, validity and extension to level 17.' Journal of reading, December 1977, vol 20, pp 242-252.
- HARRISON, C. 1980. Readability in the classroom. Cambridge : Cambridge University Press.
- HMSO. 1975. A language for life. (The Bullock report). London : HMSO.